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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/771,242	04/13/2004	Daniella I. Zheleva	CCI-014CP2	9212

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LAHIVE & COCKFIELD, LLP
ONE POST OFFICE SQUARE
BOSTON, MA 02109-2127

EXAMINER	
NIEBAUER, RONALD T	

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1654	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/771,242	ZHELEVA ET AL.	
	Examiner	Art Unit	
	RONALD T. NIEBAUER	1654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 January 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *49-54,57-66 and 69-73* is/are pending in the application.

4a) Of the above claim(s) *51-54,57-66 and 70* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *49-50,69,71-73* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Applicants amendments and arguments filed 1/14/08 are acknowledged and have been fully considered. Any rejection and/or objection not specifically addressed is herein withdrawn.

In the reply dated 1/14/08 applicant has cancelled claim 55. Claims 1-48,56,67-68 were cancelled previously. Claims 50-51,71-73 have been amended.

As noted previously, applicant has elected species of SEQ ID NO:295, H-Arg-Arg-Leu-Asn-pFPhe-NH2. The elected species was found to be obvious based on the prior art (see 103 rejection below). As such, SEQ ID NO:295 is not free of the prior art.

Claims 51-54,57-66,70 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim.

It is noted that claims 49-50,69 remain indefinite (see 112 2nd below). Since the claims are drawn to consisting of SEQ ID NO:293 which includes Phe at position X9 the elected species with pFPhe at position X9 does not read on the elected species. However, since claims 49-50,69 were previously considered the previous/maintained rejections will be addressed. It is noted that the variant in amended claim 50 does not read on the elected species.

Claims 49-50,69,71-73 are under consideration.

Priority

(Maintained) Applicant has noted that the current application is a continuation-in-part of previous applications and has noted that support for the amendments to claims 49-51 can be found throughout the specification, for example at page 33 lines 22-25 and at page 35 lines 1-5 and in the claims as originally filed for example claims 67-68. However, the claims as amended (49-51 and dependent claims) recite a particular subgenus that is not supported by the original application. See, e.g., In re Lukach, 442 F.2d 967, 169 USPQ 795 (CCPA 1971) (subgenus range was not supported by generic disclosure and specific example within the subgenus range); In re Smith, 458 F.2d 1389,1395, 173 USPQ 679, 683 (CCPA 1972) (a subgenus is not necessarily described by a genus encompassing it and a species upon which it reads). Page 33 lines 22-25 recite a condition for X_9, but do not recite the subgenus of the current claims. For example, page 33 lines 10 and 13 support a peptide in which R is replaced and X_6 is replaced. However, claims 49-50 support a subgenus in which R can be unchanged (i.e. does not agree with original disclosure of R is replaced). Claims 49-51 support a subgenus in which X_6 can be unchanged (i.e. does not agree with original disclosure of X_6 is replaced). Although applicants claim support from claims 67-68 as originally filed, there were no claims 67-68 as originally filed. Hence, claims 49-55,57-66,69-70 do not receive the priority date of the originally filed application.

It is noted that claims 71-73 are supported by the original disclosure (page 35 of specification 2/2/04 and page 39 of specification 5/19/03).

Applicants arguments and a further discussion of priority are included below in the 112 first paragraph section.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

(Maintained) **Claims 49-50,69** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims refer to a peptide of SEQ ID NO:293 which as defined on page 32 of the specification (line 22), states that X_9 is Phe. Further, in the sequence listing provided it is stated that the position corresponding to X_9 is Phe. As such, X_9 must be Phe not Cha, Hof, pFPhe, etc. as in claims 49-50,69. For purposes of examination the claims have been interpreted as open to substitutions as it appears that applicants intent is to refer to peptides that do not have Phe at X_9.

Response to Arguments 112 2nd

Applicants argue that a revised sequence listing will be 'filed shortly' (1/14/08 reply page 12 lines 12-14).

Applicant's arguments filed 1/14/08 have been fully considered but they are not persuasive.

No such sequence listing has been received. It is noted that claim 50 has been amended, however the claim still reads on a peptide consisting of SEQ ID NO:293 in which X9 is not Phe.

Claim 50 has been amended to recite variants thereof. However, it remains unclear what the variant would be of since applicant is simultaneously claiming peptides with both Phe at position X9 as well as other residues such as Cha, Hof, and pFPhe at position X9.

For these reasons, the reasons above, and the reasons set forth previously the rejection is maintained.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

(Maintained) **Claims 49-50,69** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 49-50 and dependent claim 69 are drawn to peptides in which position X9 can be a variety of natural or unnatural amino acids. Newly amended claim 50 is drawn to variants in which certain positions are modified.

Lack of Ipsis Verbis Support

The specification is void of any literal support for the subgenus of peptides claimed. Page 33 lines 22-25 recite a condition for X_9, but do not recite the subgenus of the current claims. It is noted that each of (a)-(e) (page 33 lines 10-25) recite that each of R/X6/X7/X8/X9 **is** replaced

(the claims do not recite a or b or c or d or e) with amino acids other than those as recited in the instant claims. As such the subgenus of peptides are not literally defined.

Lack of Implicit or Inherent Support

Section 2163 of the MPEP states: 'While there is no in haec verba requirement, newly added claim limitations must be supported in the specification through express, implicit, or inherent disclosure'.

Page 33 lines 22-25 recite a condition for X_9, but do not recite the subgenus of the current claims. It is noted that each of (a)-(e) (page 33 lines 10-25) recite that each of R/X6/X7/X8/X9 **is** replaced (the claims do not recite a or b or c or d or e). For example, page 33 lines 10 and 13 support a peptide in which R is replaced and X_6 is replaced. However, claims 49-50 support a subgenus in which R can be unchanged (i.e. does not agree with original disclosure of R is replaced). Claims 49-51 support a subgenus in which X_6 can be unchanged (i.e. does not agree with original disclosure of X_6 is replaced).

The disclosure, for example of page 33, would not lead one to recognize that applicant intends to claim the subgenus of claims 49-50,69 of the current claims.

Although applicants claim support from claims 67-68 as originally filed, there were no claims 67-68 as originally filed.

Hence it can not be said that claims 49-50,69 are supported by the original disclosure.

Response to Arguments 112 1st

Applicants argue that the interpretation is contrary to the teachings of the specification, in particular applicants argue that the emdodiment disclosed on page 33 lines 8-25 is used to teach

exemplary features so that each of (a) - (e) are not required. Applicants argue that one of skill in the art would recognize that applicant intended particular pentapeptides to fall within the genus as shown by the examples (specification page 35-39). Applicants argue that the broad disclosure (specification page 32 line 25-27) would make clear the applicants intended invention. Applicants state that the peptides are supported by explicit and implicit teachings (reply page 11 line 9). Applicants argue that the claims have been amended for clarification.

Applicant's arguments filed 1/14/08 have been fully considered but they are not persuasive.

Page 33 lines 22-25 recite a condition for X_9, but do not recite the subgenus of the current claims. It is noted that each of (a)-(e) (page 33 lines 10-25) recite that each of R/X6/X7/X8/X9 **is** replaced (the claims do not recite a or b or c or d or e). For example, page 33 lines 10 and 13 support a peptide in which R is replaced and X_6 is replaced. However, claims 49-50 support a subgenus in which R can be unchanged (i.e. does not agree with original disclosure of R is replaced). Claims 49-51 support a subgenus in which X_6 can be unchanged (i.e. does not agree with original disclosure of X_6 is replaced).

Since the specification teaches that each of R/X6/X7/X8/X9 **is** replaced (the claims do not recite a or b or c or d or e) one would not interpret (as applicant contends) such disclosure as, for example, R is not replaced X6 is not replaced but X9 is replaced.

Section 2163.05 II of the MPEP states:

> a "laundry list" disclosure of every possible moiety does not constitute a written description of every species in a genus because it would not "reasonably lead" those skilled in the art to any particular species

In the instant case, the broad disclosure (specification page 32 line 25-27) is such that nearly any peptide imaginable would fall within the scope and as such one would not be lead to the particular subgenus that is currently claimed. It is noted that page 32 lines 25-27 recites that at least one of a deletion, addition, or substitution, of one or more amino acid residues is possible. In considering the size of the 'laundry list' of pentapeptides, if one simply considered that any of the 5 amino acids could be substituted with any of the 20 natural amino acids there would be 20^5 (over 3 million) different combinations (it is noted that the inclusion of non-natural amino acids and/or additions as in the instant claims and as recited on page 32 line 28 further increases the size of the genus). As such, one would not be lead to the subgenus as currently claimed. Further, although examples are provided in the specification the examples do not include Cha, Hof, tyrosine, tryptophan, 1nal, 2nal, Bip, or Tic at the X9 position as currently claimed. Although applicant argues that the claims have been amended for clarity, claim 49 and 69 have not been amended. Claim 50 has been amended but the amendment has not overcome the rejection. In particular the peptide includes the scope of claim 49.

Hence it can not be said that claims 49-50,69 are supported by the original disclosure.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(Maintained) **Claims 49,50,69** remain rejected under 35 U.S.C. 102(b) as being anticipated by Fischer (US 2005/0260730 as cited previously). Note that the publication date of 11/24/05 qualifies as 102(b) art because claims 49,50,69 have the priority date of 5/2/07 (see above 'priority' and 'written description').

Fischer teach the peptide H-Arg-Arg-Leu-Asn-pFPhe-NH2 (section 0015 SEQ ID NO:4), the acetylation of peptides (section 0104) and the acylation of peptides (section 0038) thereby meeting the limitations of claims 49-50,69 of the instant invention.

Response to Arguments 102

Applicants argue that Fischer does not qualify as prior art.

Applicant's arguments filed 1/14/08 have been fully considered but they are not persuasive.

As discussed above, claims 49-50,69 have the priority date of 5/2/07. Fischer has a publication date of 11/24/05 and therefore qualifies as 102(b) prior art.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

(New) **Claims 49-50,69,71-73** are rejected under 35 U.S.C. 103(a) as being unpatentable over Zheleva et al. (WO 01/40142) and Mutoh et al. (Cancer research 1999 v59 3480-3488).

Regarding priority dates, it is unargued that claims 71-73 have a priority date of 5/19/03; as discussed above claims 49-50,69 have a priority date of 5/2/07.

Zheleva teach p21 derived inhibition peptides (abstract). Zheleva specifically teach the peptide (page 74, 27th peptide listed) H-Ala-Ala-Lys-Arg-Arg-Leu-Asn-pFPhe-NH2 which corresponds to residues 152-159 (page 7 lines 7-10). Zheleva teach that the pFPhe derivative is desirable (page 80 last paragraph) as it results in more complementary interactions. Zheleva

teach that residues may be deleted from the N-terminal end (claim 1; page 4 lines 24-26), for example in one embodiment residues 155-159 are the peptide of interest (page 6 lines 4-12). Zhelava teach acylation reactions in preparing the peptide (page 62 lines 16-21).

Zheleva does not expressly teach the elected peptide H-Arg-Arg-Leu-Asn-pFPhe-NH2.

Mutoh et al. teach p21 derived inhibitory peptides (abstract). Mutoh specifically teach that residues 155-159 are important for retention of the inhibitory activity (page 3485 lines 13-15).

Since Zheleva specifically teach the peptide (page 74, 27th peptide listed) H-Ala-Ala-Lys-Arg-Arg-Leu-Asn-pFPhe-NH2 which corresponds to residues 152-159 of p21 (page 7 lines 7-10) and further teach that residues may be deleted from the N-terminal end (claim 1; page 4 lines 24-26; page 6 lines 4-12) one would be motivated to delete residues from the N-terminal end. Since Mutoh specifically teach that residues 155-159 of p21 are important for retention of the inhibitory activity (page 3485 lines 13-15) one would be motivated to delete Ala-Ala-Lys from the peptide taught by Zheleva to arrive at H-Arg-Arg-Leu-Asn-pFPhe-NH2 which is the elected species and meets the limitations of claims 49-50,71-73 of the instant invention. Since Zheleva teach acylation reactions in preparing the peptide (page 62 lines 16-21) the limitations of claim 69 are met. From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references.

Double Patenting

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

(Maintained) **Claims 71-73** are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 20,21, 22 of copending Application No. 11/407,880. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

(Maintained) **Claims 49-50,69** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 16,17,18,20-23 of copending Application No. 11/407,880. Although the conflicting claims are not identical, they are not patentably distinct from each other. For example, the 2nd peptide of claim 20 of 11/407,880 reads on claims 49-50 of the instant invention. Claim 23 of 11/407,880 reads on claim 69 of the instant invention.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments Double Patenting

Applicants argue that the rejection will be addressed upon allowance.

Applicant's arguments filed 1/14/08 have been fully considered but they are not persuasive.

An intent to address a rejection does not overcome the outstanding rejections. As noted above, a statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RONALD T. NIEBAUER whose telephone number is (571)270-3059. The examiner can normally be reached on Monday-Thursday, 7:30am-5:00pm, alt. Friday, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang can be reached on 571-272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ronald T Niebauer/
Examiner, Art Unit 1654

/Anish Gupta/
Primary Examiner, Art Unit 1654